

CLAIMS

1. A motor vehicle comprising at least one electric motor, an energy storage device for providing drive energy for the electric motor, a plug connector connected to the energy storage device for connection to a current source and a control means for controlling the flow of current from the current source to the energy storage device characterised in that the control means (10) permits a flow of current from the energy storage device (20) to the current source (network) (30), and that there is provided an inverter in or outside the vehicle, by means of which the electrical power of the energy storage device can be fed in the form of alternating current into the current source (network).
2. A motor vehicle as set forth in claim 1 characterised in that the control means includes a device for detecting the amount of charge in the energy storage means and interrupts the flow of current from the energy storage device (20) to the network (30) when a predetermined threshold value of the remaining residual charge amount is reached.
3. A motor vehicle as set forth in one of the preceding claims characterised by a communication device for communication between the control means (10) and the network (30).
4. A motor vehicle as set forth in one of the preceding claims characterised in that the control means includes a clock or is connected to a clock.
5. A method of controlling the flow of current between an energy storage device and a network characterised in that the flow of current from the network (30) to the energy storage device is permitted in predetermined first periods of time and that the flow of current from the energy storage device to the network is permitted in also predetermined second periods of time.

6. A vehicle comprising a drive, in particular as set forth in one of the preceding claims, and a storage device connected thereto for the storage of electrical energy, and a connection for a supply network, wherein associated with the storage device is a control means, by means of which when connected to the electrical supply network the storage device can be controlledly discharged and the electrical energy is fed into the electrical supply network.

7. A vehicle as set forth in one of the preceding claims characterised in that by means of the control means the storage device is charged with controlled electrical energy when connected to an electrical supply network.

8. A vehicle as set forth in one of the preceding claims characterised in that there are provided input means which are coupled to the control means and by means of which the user of the vehicle can set the time (period of time), within which discharge of the storage device and thus feed of the energy into the supply network can be at least partially implemented.

9. A vehicle as set forth in one of the preceding claims characterised in that associated with the control means is a power management program which, when the vehicle is connected to an electrical supply network, causes an automatic charging or discharging operation for the storage device.

10. A supply network with a multiplicity of connections for a vehicle as set forth in one of the preceding claims.

11. A method of operating an electrical supply network as set forth in claim 10 characterised in that if required at least partial discharge of a plurality of storage devices, connected to the network, of vehicles as set forth in one of the preceding claims, is triggered.

12. A vehicle as set forth in one of the preceding claims characterised in that the vehicle is fitted with a current meter/energy cell which measures the electrical energy received in the storage device and energy fed into the supply network.

13. A vehicle as set forth in one of the preceding claims characterised in that provided in a vehicle is a recording unit which establishes when and what amount of electrical energy was charged into the storage device or fed into the electrical supply network.

14. A vehicle as set forth in one of the preceding claims characterised in that the vehicle has an electrical connection plug which can be connected to a corresponding connection plug of the electrical supply network, wherein the connection plug has a ground line, by means of which data of the vehicle can be exchanged by way of a data network of the electrical supply utility and in addition further data can be fed in by way of the data network, for example data about the condition of the electrical storage device of the vehicle.

15. A vehicle as set forth in one of the preceding claims characterised in that provided outside the vehicle is an inverter by means of which the current of the energy storage means of the vehicle is provided for feeding into the current source (network).